

PRECISION VOLTAGE REFERENCES: SINGLE OUTPUT

Model Number	Nominal Output	Initial Calibration	REF DRIFT	Reference Drift			Line Reg.	Load Reg.	Line Reg.	Line Reg.	DROPOUT VOLTAGE		Noise .1 to 10Hz	Long Term	Iq	I out	PTAT Out put	# of Pins	Starting Price
	oltage				0C	-40	-55C	-40	-55C	-40	-55C	Vs=5.5V IL=10mA	Vs=6.3V IL=30mA		Stability/ 1000 Hrs				
	olts	Min	Max	PPM/C	±mV	±mV	±mV	uV/V	uV/mA	uV/V	uV/mA			uV PP	uV	mA	mA		/100's
Two Terminal Shunt References																			
AD589J/S	1.23	1.2	1.25	100	5.4		12							5 uV rms	NS	0.1	5	2	\$1.70
AD589K/T				50	2.7		6												\$2.10
AD589L/U				25	1.35		3												\$5.78
AD589M				10	0.45														\$12.60
AD1580A	+1.215	1.205	1.225	100								NA	NA	16	TBD	0.06	10	3	\$0.85
AD1580B	+1.215	1.214	1.216	50															1.65
AD1586A	+2.5	2.48	2.52	100	11.25	14						200mV@1mA		30	100	0.05	10	3	\$0.85
AD1586B		2.498	2.502	50	5.625	7													1.65
AD1587A	+3.00	2.97	3.03	100	13.5	18						200mV@1mA		30	100	0.05	10	3	\$0.85
AD1587B		2.997	3.003	50	6.75	9													1.65
AD1588A	+4.096	4.055	4.137	100	18.43	24.58						200mV@1mA		30	100	0.05	10	3	\$0.85
AD1588B		4.092	4.1	50	9.21	12.29													1.65
AD1589A	+5.00	4.95	5.05	100	22.5	30						200mV@1mA		30	100	0.05	10	3	\$0.85
AD1589B		4.995	5.005	50	11.25	15													1.65
Three Terminal Series References																			
AD1581A	+1.225	1.215	1.235	100	5.6	7								10	100ppm	0.05		3	\$0.85
AD1581B	+1.225	1.224	1.226	50	2.8	3.5								30	100ppm	0.05		3	1.65
AD1582A	+2.5	2.48	2.52	100	11.25	14						200mV@1mA		30	100	0.05	10	3	\$0.85
AD1582B		2.498	2.502	50	5.625	7													1.65
AD1583A	+3.00	2.97	3.03	100	13.5	18						200mV@1mA		30	100	0.05	10	3	\$0.85
AD1583B		2.997	3.003	50	6.75	9													1.65
AD1584A	+4.096	4.055	4.137	100	18.43	24.58						200mV@1mA		30	100	0.05	10	3	\$0.85
AD1584B		4.092	4.1	50	9.21	12.29													1.65
AD1585A	+5.00	4.95	5.05	100	22.5	30						200mV@1mA		30	100	0.05	10	3	\$0.85
AD1585B		4.995	5.005	50	11.25	15													1.65
LOW-DROPOUT REFERENCES																			
REF-191G	+2.048	2.038	2.058	25	2.302	3.072	5.12					.95V	1.25V	50		0.045	30	8	\$2.20
REF-191F		2.043	2.053	10	0.9216	0.614	2.048												\$3.60
REF-191E		2.046	2.050	5	0.4604	0.614	1.024												\$7.50
REF-192G	+2.5	2.490	2.510	25	2.81	3.75	6.25					1V	1.4V	50		0.045	30	8	\$2.20
REF-192F		2.495	2.505	10	1.125	1.5	2.5												\$3.60
REF-192E		2.498	2.502	5	0.562	0.75	1.25												\$7.50
REF-193G	+3.00	2.990	3.010	25	3.37	4.5	7.5					0.8V	1V	50		0.045	30	8	\$2.20
REF-197G	+2.7	2.690	2.710	25	2.7338	3.645	6.075					.5V	1.3V	50		0.045	30	8	\$2.20
REF-197F		2.695	2.705	10	10	1.458	2.43												
REF-197E		2.698	2.702	5	0.5468	0.729	1.215												
REF-196G	+3.3	3.290	3.310	25	3.7125	4.95	8.25					0.8	1V	50		0.045	30	8	\$2.20
REF-198G	+4.096	4.086	4.106	25	4.608	6.144	10.24					.5V	1.3V	50		0.045	30	8	\$2.20

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	oltage				0C	-40	-55C	-40	-55C	-40	-55C	Vs=5.5V	Vs=6.3V		Stability/ 1000 Hrs			Out put	of Pins	Price
	olts	Min	Max	PPM/C	±mV	±mV	±mV	uV/V	uV/mA	uV/V	uV/mA			uV PP	uV	mA	mA			/100's
REF-198F		4.091	4.101	10	1.843	2.458	4.096													\$3.60
REF-198E		4.094	4.098	5	0.922	1.229	2.048													\$7.50
REF-194G	+4.5	4.490	4.510	25	5.0625	6.75	11.25					.5V	1.3V	50		0.045	30		8	\$2.20
REF-194F		4.495	4.505	10	2.025	2.7	4.5													\$3.60
REF-194E		4.498	4.502	5	1.0125	1.35	2.25													\$7.50
REF-195G	+5.00	4.990	5.010	25	5.625	7.5	12.5					.5V	1.3V	50		0.045	30		8	\$2.20
REF-195F		4.995	5.005	10	2.25	3	5													\$3.60
REF-195E		4.998	5.002	5	1.125	1.5	2.5													\$7.50
Voltage References, Single Output																				
AD580J	+3.00	2.425	2.575	85	15									60	250	2	10		3	\$2.36
AD580K/S		2.475	2.525	40/55	7.00		25													\$4.15
AD580L/T		2.490	2.510	25	4.30		11													\$6.56
AD580M/U				10	1.75		4.50													\$11.34
AD680J	+2.50	2.4900	2.5100	25	2.81									10	63	250	10		8	\$1.75
AD680A		2.4950	2.5005	20	2.25	3														\$3.25
AD680JT		2.4900	2.5100	30	3.38									8		0			8	\$1.60
AD780 w/Vout pin open																				
AD780A/S	+2.50	2.495	2.505	20-Jul	0.7875	1.1	5							4	20	1	±10	yes	8	\$3.90
AD780B	+2.50	2.499	2.501	3	0.3	0.45	na											yes		\$6.50
AD780 w/Vout pin grounded																				
AD780A/S	+3.00	2.995	3.005	7/20	0.9	1.3	6							4	20	1	±10	yes	8	\$3.90
AD780B	+3.00	2.999	3.001	3	0.4	0.5	na											yes		\$6.50
AD1403	+2.50	2.475	2.525	40	4.5									NS	NS	1.5	10		8	\$1.65
AD1403A	+2.50	2.490	2.510	25	2.81															\$2.40
REF-03G	+2.50	2.485	2.515	50		30								6	NS	1.4	10			\$1.75
REF-43G	+2.50	2.4970	2.5030	10		12								10		0.45	10	yes	8	\$3.75
REF-43F	+2.50	2.4995	2.5005	25		20												yes		\$8.93
REF-43B	+2.50	2.4995	2.5005	10			10											yes		\$20.00
AD586J/S	+5.00	4.980	5.020	25/20	5.625		10							4	75	3	10		8	\$2.50
AD586K		4.995	5.005	15	3.375															\$3.60
AD586L/T		4.9975	5.0025	5/10	1.125		5													\$4.80
AD586M		4.998	5.002	2	0.675															\$5.50
REF-02D	+5.00	4.9	5.1	250	110	150								1				yes		\$1.65
REF-02C		4.95	5.05	65	29	39								2				yes		\$2.15
REF-02H		4.975	5.025	25	11.25									3				yes		\$4.32
REF-02A/E		4.985	5.015	8.5	3.8		8.5							4				yes		\$5.99
REF-05B	+5.00	4.975	5.125	25			22.5													\$27.00
REF-05A		4.985	5.015	8.5			7.5							15	50	1.4	10		8	\$38.25
AD581J/S	+10.00	9.970	10.030	30	13.5		30							50	250	1	10		3	\$3.45

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	oltage			0C	-40	-55C	-40	-55C	-40	-55C	Vs=5.5V IL=10mA	Vs=6.3V IL=30mA		Stability/ 1000 Hrs					
	olts	Min	Max	PPM/C	±mV	±mV	±mV	uV/V	uV/mA	uV/V	uV/mA		uV PP	uV	mA	mA			/100's
AD581K/T		9.990	10.010	15	6.75		15												\$5.40
AD581L/U		9.995	10.005	5/10	2.25		10												\$11.00
AD587J/S	+10.00	9.990	10.010	20	9		20						4	150	4	10	8		\$2.80
AD587K/T		9.995	10.005	10	4.5		10												\$3.35
AD587L/U				5	2.25		5												\$5.00
REF-01C		9.900	10.100	65	45	45	45						30	NS	1.4	10	8		\$1.58
REF-01H		9.950	10.050	25	17														\$2.59
REF-01E/A	+10.00	9.970	10.030	8.5	6		15												\$5.99
X-FET REFERENCES																			
ADR290G	+2.048	2.042	2.054	25/30	2.30	3.07	6.14	25	61.4	41.6	123	.65V@1mA	10	.2PPM	0.01			3/8	
ADR290F		2.045	2.051	15/20	1.38	1.80	4.10	21	51.2	33.3	82								
ADR290E		2.046	2.050	15/10	0.7	1.00	2.05	21	51.2	33	82								
ADR291G	+2.5	2.495	2.505	25/30	2.81	3.75	7.5	30.5	75	50.8	150	.8V@1mA	10	.2PPM	0.01			3/8	
ADR291F		2.498	2.502	15/20	1.7	2.25	5	25.4	62.5	40.6	100								
ADR291E		2.499	2.501	15/10	0.9	1.2	2.5	25.4	62.5	40.6	100								
ADR292G	+4.096	4.091	4.101	25/30	4.608	6.144	12.28	50	123	83.2	246	.65V@1mA	10	.2PPM	0.01			3/8	
ADR292F		4.094	4.098	15/20	2.76	3.68	8.19	41.6	102.4	83.2	164								
ADR292E		4.095	4.097	15/10	1.47	1.96	4.096	41.6	150	66.6	164								
ADR293G	+5.0	4.995	5.005	25/30	5.62	7.5	15	61	125	101.6	300	.65V@1mA	10	.2PPM	0.01			3/8	
ADR293F		4.998	5.002	15/20	3.37	4.5	10	50.8	125	81.3	200								
ADR293E		4.999	5.001	15/10	1.8	2.4	5	50.8		81.3	200								